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Examining Locus of Control and Attributional Style as Contributing Factors in the Narcissism-Aggression Relation

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EXAMINING LOCUS OF CONTROL AND ATTRIBUTIONAL STYLE AS CONTRIBUTING FACTORS IN THE NARCISSISM-AGGRESSION RELATION

by

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ABSTRACT

EXAMINING LOCUS OF CONTROL AND ATTRIBUTIONAL STYLE AS CONTRIBUTING FACTORS IN THE NARCISSISM-AGGRESSION RELATION

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Previous research has shown a consistent relation between narcissism and aggression in adults (Bushman & Baumeister, 1998; Stucke, 2003). Although relatively few studies have examined this relation in adolescents, narcissism has previously been correlated with behavioral problems (Washburn, McMahon, King, Reinecke, & Silver, 2004) and aggression (Barry, Grafeman, Adler, & Pickard, 2007; Thomaes, Bushman, Stegge, & Olthof, 2008) in youth. The current study examined attributional style (i.e., internality vs. externality) and locus of control as contributing variables in the narcissism-aggression relation in adolescents. The current study consisted of 148 male and 26 female at-risk adolescents (M = 16.04 years, SD = .88). Narcissism was not related to overall aggression in the current study. However, narcissism was significantly correlated with self-esteem and proactive aggression. Contrary to expectations, locus of control did not moderate the narcissism-aggression relation, and a self-aggrandizing attributional style did not mediate the narcissism-proactive aggression relation. However, LOC was a moderator in the relation between self-esteem and aggression such that low self-esteem was associated with higher aggression for individuals with an external LOC. The implications of this study for understanding how self-perception is related to adolescent aggression are discussed below.

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TABLE OF CONTENTS

LIST OF TABLES

Table

LIST OF ILLUSTRATIONS

Figure

CHAPTER I

INTRODUCTION

A link between narcissism and aggression is well-documented (Barry, Grafeman et al., 2007; Bushman & Baumeister, 1998; Stucke, 2003; Washburn et al., 2004), with research suggesting that factors such as dominance (Ruiz, Smith, & Rhodewalt, 2001) and self-serving attributions (Stucke, 2003) may help explain this relation among college-aged adults. Although this research has been primarily conducted on adults, initial evidence has also pointed to a relation between narcissism and aggression in adolescents (Barry, Grafeman et al., 2007; Thomaes, Bushman, Stegge, & Olthof, 2008; Washburn et al., 2004). Many theorists believe that aggression that begins in childhood will likely follow into adulthood (Loeber, 1990). It seems necessary, therefore, to understand aggressive behavior and its related risk factors in youth. The purpose of the current study was to extend previous literature on adolescent narcissism by examining the role of certain potential contributing factors (i.e., locus of control, attributional style) to the narcissism-aggression relation.

According to Bushman and Baumeister (1998), narcissism is associated with aggressive responses in order to repair a fragile sense of self when one's self-esteem is threatened. Ego threat may be an important variable in the narcissism-aggression relation, but it is obviously not the only factor since other variables have been shown to play a role. For example, attributional style has also been given attention in this relation. It has been shown that individuals routinely tend to take credit for good things that happen (i.e., internal attributions for positive events; Rhodewalt & Morf, 1998). Evidence of this overall positive illusory bias has been found in other studies as well (Hughes, Cavell, & Grossman, 1997; Owens, Goldfine, Evangelista, Hoza, & Kaiser, 2007; Robins & Beer, 2001). However, some theorists believe that narcissists engage in this behavior more than others (Emmons, 1984). Indeed, Rhodewalt and Morf (1998) found that individuals

with high levels of narcissism were more likely to make internal attributions for success. In another study, adults high in narcissistic traits were more likely to make internal attributions for success and external attributions for failure, the latter of which resulted in an increased rate of anger or depression after receiving negative feedback (Stucke, 2003). If narcissism is associated with a tendency to attribute blame to external factors (e.g., people) for negative events, then it is possible that these attributions contribute to aggression against the people thought to have caused the negative event. That is, such attributions may help explain the narcissism-aggression relation.

A similar concept is locus of control (LOC) which has not been previously studied as a factor in the narcissism-aggression relation. According to Rotter (1990), LOC refers to the extent to which a person believes that outcomes are based on his or her own actions or "personal characteristics versus the degree to which persons expect that the reinforcement or outcome is a function of chance, luck, or fate, is under the control of powerful others, or is simply unpredictable" (p. 489). LOC differs from attributional style in that attributional style is event specific and describes how an individual perceives the cause of the event. On the other hand, LOC is typically stable and not event dependent (Kulas, 1996). Individuals with more of an external LOC tend to believe that events in their lives are controlled by external forces over which they have no control (Rotter, 1990). An external LOC has been related to negative outcomes such as aggression (Zainuddin & Taluja, 1990) and depression (Aiken & Baucom, 1982) in adults.

In contrast, an internal LOC is the belief that outcomes in one's life are under his/her own control (Rotter, 1990). An internal LOC has been related to positive outcomes, including high academic achievement in adults (Findley & Cooper, 1983) and emotional well-being in adolescent girls (Armstrong & Boothroyd, 2008). However, this pattern may be different for individuals with narcissistic characteristics. For example, internal LOC may actually be associated with aggression among individuals with narcissistic traits because narcissism is

associated with a heightened sense of control or need for power (Raskin & Terry, 1988). Individuals with narcissistic traits tend to exploit others to achieve their goals (Hotchkiss, 2005) and may try to exert their heightened sense of control through exploitation of others, including acting aggressively toward them. This issue was addressed in the current study and is further discussed below.

Narcissism

Narcissism is used to describe a set of personality characteristics that differ in level from person to person (Rhodewalt & Morf, 1998) and is characterized by individuals who present grandiose views of themselves and want other people to see them as superior as well (Baumeister, Bushman, & Campbell, 2000). These individuals tend to be interpersonally exploitative and seek power, and it is believed that individuals with high levels of narcissistic traits pay attention to their social status and struggle to maintain it (Morf & Rhodewalt, 2001). In addition, these individuals are invested in having other people agree with their grandiose self views which may lead to constant gratification seeking (Baumeister et al., 2000). Moreover, Bogart, Benotsch, and Pavlovic (2004) suggest that social comparison is particularly important to people who are higher on narcissistic traits. Bogart and colleagues found that individuals with high levels of narcissism displayed greater positive affect after comparing themselves to individuals they perceived as substandard to them. Such individuals also were more likely to become hostile after upward social comparisons (Bogart et al., 2004). Therefore, it appears that individuals with high levels of narcissism may attempt to bolster their esteem through attempts to increase their social status.

Morf and Rhodewalt (2001) developed a self-regulatory model to explain behavioral manifestations of narcissism. In this model, narcissistic individuals are constantly seeking approval, but because of their ostentatious attitudes, they rarely attain the approval they seek and therefore continue to seek additional approval (Morf & Rhodewalt, 2001). Vazire and Funder (2006) believe that impulsivity should be added to the model proposed by Morf and Rhodewalt

(2001), and they assert that the reason that individuals with narcissistic traits rarely attain the approval they seek is because they engage in negative impulsive behaviors. Thus, the unpleasant actions of narcissists spoil their chances of receiving true admiration, but they are believed, according to this view, to be unable to stop acting in such a way. The continued mistreatment of others ultimately, and ironically, hinders the goal of the narcissist.

Although much of the empirical evidence and theory on narcissism involves adults, Raskin, Novacek, and Hogan (1991) propose a model for the development of narcissism. According to this developmental model, children realize that if they "perform" how their parents expect them (e.g., as charming and intelligent) they will be rewarded with love and acceptance (Raskin et al., 1991). Failure to live up to parental expectations results in rejection, which in turn, makes the child feel shameful or depressed (Raskin et al., 1991). According to this view, the child eventually learns to master social situations to receive the love and attention from his or her parents, but in attempting to do so without becoming depressed or hostile, the child develops fantasies of grandiosity. To validate these feelings of superiority, the child attempts to dominate his or her social interactions with peers. Successful dominance of peers improves one's perceived social status and self-esteem, but unsuccessful attempts to assert dominance over one's peers may result in shame and insecurity. If the child is unable to maintain his or her feelings of grandiosity, then self-esteem may decline, and hostility will likely occur (Raskin et al., 1991). This viewpoint suggests that individuals with high levels of narcissism may place a greater emphasis on controlling social situations and may use them either to bolster their esteem or protect it.

Furthermore, several theoretical models of narcissism assert that narcissists struggle with maintaining the superior images they present. For example, Zeigler-Hill (2006) suggested that narcissism may be similar to what is known as discrepant high self-esteem and found that individuals with discrepant high self-esteem are unsuccessful at maintaining the grandiose self-images that they create. Discrepant high self-esteem is characterized by low implicit (i.e.,

nonconscious) self-esteem and high explicit (i.e., conscious) self-esteem (Brown & Bosson, 2001). Although individuals with discrepant high self-esteem assert confidence and grandiosity, insecurities are found at the core of their self-worth (Brown & Bosson, 2001), which is consistent with many descriptions of narcissism. Indeed, Zeigler-Hill (2006) found that individuals with discrepant high self-esteem had the highest levels of narcissism, with Jordan and colleagues finding that narcissism was associated with high explicit but low implicit self-esteem (Jordan, Spencer, Zanna, Hoshino-Browne, & Correll, 2003).

Consistent with these findings, studies have suggested that although individuals with narcissistic traits have inflated self views, these views are fragile (Baumeister et al., 2000). According to Morf and Rhodewalt (2001), narcissists have developed an inflated sense of self up to which they cannot actually live. They must then rely on outside factors of appraisal to validate their importance because they may feel that internal approval is not sufficient. Individuals with narcissistic characteristics use social situations to improve and maintain their grandiose views (Morf, Ansara, & Shia, 2001). Bogart and colleagues (2004) suggest that individuals high in narcissistic traits use social situations for self-enhancement purposes. When social situations do not help improve an individual's grandiose image, he or she is likely to respond with aggression (Raskin et al., 1991). That is, the desire to be admired by others and have status or power over others as well as the desire to protect one's self-image would suggest that one way in which narcissistic individuals fulfill their interpersonal needs is through aggressive behavior.

Reactive Versus Proactive Aggression

Aggression research has identified two forms of aggression: reactive and proactive (Dodge & Coie, 1987). Reactive aggression is thought to be impulsive and unplanned (Dodge & Coie, 1987). Usually when an individual engages in reactive aggression, he or she is presumably responding to a perceived threat (Dodge & Coie, 1987). On the other hand, proactive aggression describes actions that are planned in an attempt to gain something (Dodge & Coie, 1987). No

perceived threat or provocation needs to occur for an individual to engage in proactive aggression.

The underlying mechanisms behind proactive and reactive aggression are believed to be different as reflected in the different theoretical perspectives that describe the motives behind these forms of aggression. The frustration-aggression model is used to help explain reactive aggression. The frustration-aggression hypothesis was initially introduced in 1939 and stated that aggression was a direct result of frustration (Dollard, Doob, Miller, & Mowrer, 1939). Dollard and colleagues believed that individuals became frustrated when their attempts to meet particular goals were thwarted. Berkowitz (1963) revised the frustration-aggression hypothesis by stating that frustration intensifies the anger felt by someone but does not necessarily have to occur before the aggressive act. In the frustration-aggression model, individuals become hostile in response to something, such as frustration or a state of heightened anger (Berkowitz, 1963). On the other hand, Bandura's (1973) social learning theory is used to describe proactive aggression. According to Bandura's theory, the individual is not concerned with the potential negative consequences of aggression; rather, he/she is focused on the potential gains (Bandura, 1973). Therefore, an individual engages in premeditated aggressive acts in order to gain or benefit from the act (Bandura, 1973). Terms used synonymously for reactive and proactive aggression are hostile and instrumental aggression, respectively (Bushman & Anderson, 2001).

Although reactive (hostile) and proactive (instrumental) aggression tend to be explained from different theoretical perspectives and are based on different motivational factors, some researchers believe that they should not be distinguished as two forms of aggression (Bushman & Anderson, 2001). Bushman and Anderson (2001) state that some forms of reactive aggression are planned and that engaging in reactive aggression could be a means of gaining something (e.g., respect), which is presumably a hallmark of proactive aggression. It may also be difficult to determine how much time has to pass before an act of aggression is considered planned or

premeditated as opposed to a reaction to a perceived threat (Bushman & Anderson, 2001). Bushman and Anderson (2001) add that some aggressive acts have multiple motives and that it is, therefore, too simplistic to categorize them as either proactive or reactive. Although proactive and reactive aggression may be highly correlated, research suggests that they have somewhat divergent associated features (Barry, Thompson et al., 2007; Crick & Dodge, 1996). Therefore, although the arguments against differentiating proactive and reactive aggression all have merit, this distinction may still be useful for understanding the mechanisms by which narcissism is related to aggression. Narcissistic individuals may engage in reactive aggression to repair their fragile self-esteem in the face of ego threats and use proactive aggression to otherwise bolster their social status. This study investigated the role of particular mediator and moderator variables for each of these forms of aggression separately, although it was expected that reports of reactive and proactive aggression would be highly interrelated.

Narcissism and Aggression

As noted above, there is a clear link between narcissism and aggression based on several previous studies, mostly conducted with adults. A study by Twenge and Campbell (2003) showed that individuals with higher levels of narcissism were more likely to be aggressive in a laboratory paradigm toward people who they thought rejected them. Similarly, Bushman and Baumeister (1998) found that individuals with high levels of narcissism showed more aggression following an ego threat. Laboratory results in a sample of adolescents demonstrated the same pattern (Thomaes et al., 2008). Furthermore, a study in children found that narcissism was related to both proactive and reactive aggression (Barry, Thompson, et al., 2007), with additional studies in youth having also demonstrated a correlation between narcissism and aggression (Barry, Grafeman, et al., 2007; Washburn et al., 2004). However, the underlying variables that help explain these associations have not been extensively investigated.

Perceived control over events in everyday life (i.e., LOC) may help explain why individuals with high levels of narcissism are more likely to engage in aggressive acts. If such individuals believe that they control the outcomes in their lives, they may take proactive steps to achieve a desired goal. Proactive aggression may be one instrument used by individuals with high levels of narcissism to gain the respect and admiration of their peers. Previous studies have found relations between LOC and aggression (Findley & Cooper, 1983; Halloran, Doumas, John, & Margolin, 1999). Usually, an external LOC is related to aggression (Storms & Spector, 1987), and an internal locus of control is correlated with positive events (Findley & Cooper, 1983). However, for some individuals, an internal LOC is not correlated with positive outcomes. One study, for example, showed that for girls, an internal LOC was related to aggression (Halloran et al., 1999). The authors believe that aggression may be related to an internal LOC for girls who feel responsible for failure and in turn, use aggression as a primary coping method. In essence, the authors suggest that different mechanisms account for aggression as it relates to gender and LOC. Of note, attributing power to others was tied to lower aggressive tendencies for boys.

It is likely that individuals with high levels of narcissism have a primarily internal LOC. Individuals with an internal LOC believe that events or outcomes are contingent on their personal actions (Rotter, 1990), and these individuals tend to believe that they have the power to control events. Similarly, narcissism is associated with a heightened sense of control or need for power (Raskin & Terry, 1988). As noted above, one way in which individuals with high levels of narcissistic traits may try to exert their power or maintain their perceived control is by the exploitation of others. It has been shown that individuals with narcissistic traits exploit others to achieve their goals (Hotchkiss, 2005) and that a main goal for these individuals is maintaining their supposed superior social status (Morf & Rhodewalt, 2001). More specifically, individuals with high levels of narcissism may use proactive aggression as a way to degrade others in an effort to preserve or bolster their social status. According to Morf and Rhodewalt (2001),

individuals with narcissistic traits are constantly devising ways of getting others to agree with the grandiose ideas they have constructed for themselves. Since narcissistic individuals may feel that they have control over events in their lives, it is plausible that proactive aggression is one tool that they would use to exert control in hopes of obtaining a desired outcome. Therefore, an internal LOC may be related to aggression for individuals with narcissistic tendencies, even though an external LOC may be more consistently related to aggression for individuals in general. Stated another way, the relation between narcissism and proactive aggression may be particularly strong for individuals who also report a tendency toward an internal LOC.

Although individuals with higher levels of narcissism may internalize control of daily events, research has shown that they are likely to attribute failures to sources other than themselves (Stucke, 2003). An additional possibility is that deflecting the responsibility of negative events may lead to aggression toward the perceived source of blame. As noted above, narcissism is associated with a tendency to make internal attributions for positive, but not negative, events (Stucke, 2003). Indeed, several studies have documented the link between an internal attributional style for positive events and narcissism. Rhodewalt and Morf (1998) tested the attributions of individuals high in narcissism versus individuals low in narcissism. Results showed that individuals with high levels of narcissism were more likely to attribute success to their abilities. In another study, individuals with narcissistic traits tended to view themselves as performing superior to their peers, and they perceived themselves more positively than others perceived them (John & Robins, 1994). Farwell and Lloyd (1998) found that individuals higher on narcissistic traits overestimated their success and their rank, determined by grades, in a class. These individuals also were more likely to attribute positive grade achievement to their own ability (Farwell & Lloyd, 1998).

Making internal attributions for success would not necessarily link narcissism to aggression because it is not during success that narcissism is associated with aggression (Barry,

Chaplin, & Grafeman, 2006). However, blaming external factors for failure may contribute to aggression for individuals with high levels of narcissism (Stucke, 2003). Narcissists tend to regard themselves in such a way that if something negative happens, they are likely to attribute it to external factors, which may include circumstances or other people (Stucke, 2003). One potential response to failure caused by another, then, would be to aggress against the presumed cause of the failure. Bushman and Baumeister (1998) demonstrated that narcissism was related to aggression after negative feedback toward the presumed source of the feedback but not toward another target. The study conducted by Stucke (2003) showed that when individuals with high levels of narcissism were given negative feedback, they reacted with anger. However, individuals with low levels of narcissism, given the same feedback, were more likely to show feelings of depression. Therefore, the attributional style that individuals with narcissistic traits display may be helpful in explaining why narcissistic individuals are more prone to reactive aggression in certain situations. It is likely that adolescents with narcissistic features demonstrate the same self-aggrandizing attributional style as adults with narcissism, although this issue has not been directly examined.

It may be that individuals with narcissistic traits engage specifically in reactive forms of aggression because they hold others, and not themselves, accountable for negative events. Reactive aggression is usually unplanned, and the individual uses force in response to a perceived threat or provocation (Dodge & Coie, 1987). Therefore, the aggression that is manifested after negative events would be best described as reactive in nature. As noted above, research has also shown that narcissism is related to proactive aggression (Barry, Thompson, et al., 2007; Washburn et al., 2004). Nevertheless, attributional style may not explain this pattern of aggressiveness for individuals with high levels of narcissism because proactive aggression is thought to typically occur without provocation from another person. The current study examined

the potential mediational role of internal/external attributions in the narcissism-aggression relation with an adolescent population.

Self-Esteem

Narcissism and high self-esteem have similar characteristics. However, it is too simplistic to regard extreme levels of high self-esteem and narcissism as equivalent. From previous studies, one may conclude that narcissism and high self-esteem are related, but they are also distinct self-perception constructs (Barry et al., 2003). Therefore, the relation between self-esteem and aggression must be conceptualized differently than that of narcissism and aggression.

Traditionally, many researchers believed that low self-esteem was a risk factor for aggression (Rogers, 1961). However, studies linking low self-esteem and aggression have been inconsistent in their findings. A recent series of studies found a relation between low self-esteem and aggression, independent of narcissism (Donnellan et al., 2005). Baumeister and colleagues (1996) suggested an alternative view in which under certain conditions (i.e., ego threat), elevated self-esteem, particularly in the form of narcissism, is associated with aggression. Still, the overall evidence calls into question the role of self-esteem in aggressive behavior, particularly above and beyond that attributed to its shared variance with narcissism.

Bushman and Baumeister (1998) address some of the ways in which narcissism and self-esteem can be linked conceptually. For example, one way to connect these constructs is by describing narcissism as a grandiose sense of self-worth or inflated self-esteem. Another possible conceptualization is that self-esteem can be divided into different categories and that narcissism is a possible sub-type of high self-esteem (Bushman & Baumeister, 1998). Although it may seem, in some ways, parsimonious to simply regard the two constructs as synonymous, initial research in children has shown no relation or a moderate relation between level of self-esteem and narcissism (Barry et al., 2003; Barry, Grafeman, et al., 2007). Research with adults also shows a moderate relation between these constructs (Brown & Zeigler-Hill, 2004; Raskin & Terry, 1988). In

addition, people with high levels of narcissism may very well seem to have high self-esteem, but this self-esteem may be considered fragile (Baumeister et al., 2000), and research has further drawn parallels between narcissism and high self-esteem, as noted above (Zeigler-Hill, 2006). One distinction is that high self-esteem per se does not appear to be as tied to day-to-day events as narcissism (Kernis, 2003), but individuals with discrepant high self-esteem (i.e., narcissism) may allow daily circumstances to determine their self-worth (Zeigler-Hill, 2006). If circumstances in the individual's life are going well, he or she may have a positive self-evaluation, but if things are going poorly, these feelings may change accordingly (Zeigler-Hill, 2006). Another distinguishing feature between narcissism and high self-esteem is that narcissism is associated with a superior self-view as well as a desire for others to regard oneself as superior; however, individuals with high self-esteem who are not particularly narcissistic may think well of themselves and are not overly concerned with the opinions of others (Baumeister et al., 2000; Kernis, 2003). The complex relation between self-esteem and narcissism—and their theoretical divergence—appears to underscore the idea that (high) self-esteem and narcissism are two different constructs.

Their relations with aggression may mark another important distinction between narcissism and self-esteem. From previous research with adults and adolescents, the relation between high self-esteem and aggression appears to differ from the relation between narcissism and aggression (Ang & Yusof, 2005; Barry, Grafeman, et al., 2007; Bushman & Baumeister, 1998), with separate factors or mechanisms likely helping to explain these differences. The variables of interest in the present study (i.e., locus of control and attributional style) may be two such factors. There has not been a large body of research linking attributional style and self-esteem. Rhodewalt and Morf (1998) state that individuals, in general, tend to make internal attributions for success, which do not typically correspond to increased aggression. Individuals with high self-esteem are more likely than individuals with low self-esteem to make these internal

attributions for positive events (Zantura, Guenther, & Chartier, 1985) and some negative events (Fitch, 1970). However, as noted above, individuals high in narcissistic features tend to make internal attributions for success and external attributions for failure (Stucke, 2003). As examined in this study, making external attributions for failure, including deflecting blame, may help explain the association between aggression and narcissism. There is no evidence from previous research to suggest that this pattern would necessarily apply to the relation between high self-esteem and aggression, particularly because high self-esteem is not strongly tied to a tendency to make external attributions for failure.

High self-esteem has also been associated with an internal locus of control (Griffore, Kallen, Popvich, & Powell, 1990). An internal locus of control is generally not thought to be associated with aggression, and this pattern is not expected to differ based on one's level of self-esteem. On the other hand, as noted above, for individuals with high levels of narcissism, an internal locus of control may heighten the risk of aggressive behavior (Hotchkiss, 2005). Again, individuals with high levels of narcissism may try to exert their control by exploiting others as a way to bolster their social status (Bushman & Baumeister, 1998; Hotchkiss, 2005). High self-esteem is not tied to being overly concerned with social status, and thus, self-esteem is unlikely to be predictive of attempts to bolster one's status or exert control through aggressive means. On the other hand, narcissistic individuals may respond aggressively as a way of actively controlling their environment and status (Bushman & Baumeister, 1998).

CHAPTER II

CURRENT STUDY

The primary aim of the current study was to explore attributional style and locus of control as contributing factors in the narcissism-aggression relation among at-risk adolescents. The aim of this study was to extend previous literature by examining attributional style as a potential mediator in this relation—an issue which has received some attention in adults. That is, this study investigated whether a self-aggrandizing attributional style (Rhodewalt & Morf, 1998) is associated with narcissism in adolescents and whether such an approach to attributing causes to negative and positive events helps explain the narcissism-aggression relation. A self-aggrandizing attributional style was expected to act as a mediator in this relation because this particular style of displacing blame may cause an individual to aggress against the perceived source of blame. Research has not examined LOC as it relates to the narcissism-aggression relation. An internal LOC, for individuals with high levels of narcissism, may be a risk factor for proactive aggression. That is, LOC was expected to moderate the relation between narcissism and aggression because individuals with higher levels of narcissism were expected to have an internal LOC since narcissists seek control or power (Raskin & Terry, 1988).

Reactive and proactive aggression were assessed to determine if different patterns in the proposed relations emerge for these forms of aggression. LOC and attributional style were expected to be particularly relevant for different forms of aggression (i.e., attributional style for reactive aggression; LOC for proactive aggression). An internal LOC was expected to be associated with proactive aggression for these individuals because it may be seen as a way to gain respect. However, LOC was not expected to serve as a mediator in the relation between narcissism and aggression since an external LOC is usually related to aggression (Storms & Spector, 1987). It was anticipated that an internal LOC would only be associated with aggression

for individuals with high levels of narcissism. In short, an internal LOC was expected to increase the probability of a relatively narcissistic individual engaging in aggression, not explain a mechanism by which such an individual exhibits aggressive behavior. However, since a self-aggrandizing attributional style has been related to the narcissism-aggression relation in adults (Stucke, 2003), the same pattern was expected for the current study. Specifically, it was expected that blaming others for negative things that happen may correspond to a tendency to react aggressively to the perceived cause of misfortune. Thus, this model may be particularly relevant for reactive forms of aggression. Finally, this study also examined the role of self-esteem as it relates to aggression, LOC, and attributional style to determine how the proposed models for narcissism might be consistent with, or divergent from, models for self-esteem.

Hypotheses

It was hypothesized that narcissism would be associated with both proactive and reactive aggression, an internal locus of control, high self-esteem, internal attributions for positive events, and external attributions for negative events (Hypothesis 1). Consistent with previous literature (Donnellan et al., 2005), it was further hypothesized that when controlling for narcissism, low self-esteem would be correlated with aggression. High self-esteem was expected to be positively correlated with an internal locus of control and internal attributions for positive events (Chandler, Lee, & Pengilly, 1997), but low self-esteem was expected to correspond to internal attributions for negative events (Fitch, 1970; Hypothesis 2). It was predicted that LOC would be a moderator in the narcissism-aggression relation. That is, an external LOC was expected to be related to aggression overall, but internal LOC was expected to be related to aggression among individuals with higher levels of narcissism. LOC was not expected to moderate the association between self-esteem and aggression (Hypothesis 3). In addition, although it was hypothesized that narcissism would be associated with more internal attributions for positive events, attributions for positive events were not expected to be specifically correlated with (reactive or proactive) aggression

(Hypothesis 4). Instead, it was predicted that attributional style would mediate the narcissism-aggression relation in that narcissism would be related to reactive aggression through its association with external attributions for negative events as well as a self-aggrandizing attributional style marked by a combination of positive internal attributions and negative external attributions (Hypothesis 5). In particular, this model was expected to help explain the relation between narcissism and reactive aggression because reactive aggression is unplanned, and individuals who engage in this type of aggression usually do so in response to a perceived negative event (Dodge & Coie, 1987). A different pattern was expected for self-esteem in that aggression was not expected to be correlated with self-esteem, in the absence of narcissism (Donnellan et al., 2005); therefore, such a mediational model would not apply to self-esteem.

CHAPTER III

METHODOLOGY

Participants

Participants were 177 youth, 148 males and 26 females, ranging in age from 16-19 (M = 17.04 years, SD = .88) enrolled in a 22-week military-style intervention program for youth who have dropped out of school. Background data were missing for three participants. The sample consisted mostly of European Americans (60.3%), with 37% of participants identifying themselves as African American, and 2.7% identifying themselves as being from other ethnic backgrounds. Participants are considered "at-risk" based on their having dropped out of school. The intervention program is voluntary (i.e., not court-ordered or state-mandated).

Materials

Demographic Information Participants

Completed a demographic questionnaire to document the race, age, and sex of each participant. Race and age were obtained primarily for descriptive purposes. However, sex was explored as a potential moderator in the relations under investigation.

Narcissistic Personality Inventory for Children (NPIC; Barry et al., 2003)

The NPIC is derived from the Narcissistic Personality Inventory (NPI) for adults (Raskin & Terry, 1988) and contains 40 forced-choice items. The NPI was developed to measure non-pathological narcissism (Raskin & Terry, 1988). The NPIC was designed to assess the same features of the NPI while using developmentally appropriate language for youth and a wider response scale. For each item, participants chose one statement from a pair (e.g., "I can talk my way out of anything" or "I try to accept what happens to me because of my behavior") and then rated the selected statement as being "sort of true" or "really true," resulting in a four-point response scale for each item. A total NPIC score was generated for each participant by summing

the total score for each item. The NPI, from which the NPIC is based, has shown good psychometric properties (Raskin & Terry, 1988) and has been widely used in research. The present study revealed an internal consistency coefficient alpha of .83 for the total NPIC composite.

Peer Conflict Scale (PCS; Marsee, Kimonis, & Frick, 2004)

The PCS is a self-report questionnaire designed to measure aggression. The PCS consists of 40 items which assess proactive (20 items; e.g., "I start fights to get what I want") and reactive aggression (e.g., 20 items; "Most of the time I have gotten into arguments or physical fights, I acted without thinking"). Participants rated each item on a scale from 0 (not at all true) to 3 (definitely true). Factor analysis (Marsee et al., 2004) has supported the conceptual differences between the proactive and reactive aggression scales of the PCS. An overall coefficient alpha of .96 was revealed for the current sample, with internal consistency coefficients of .94 and .91 for proactive and reactive aggression, respectively.

Rotter's Internal-External Locus of Control Scale (Rotter, 1966)

Rotter's Internal-External Locus of Control Scale was designed to assess an internal (e.g., "People's misfortunes result from the mistakes that they make") versus an external (e.g., "Many of the unhappy things in people's lives are partly due to bad luck") LOC. It consists of 29 forced-choice item pairs. Participants were directed to choose the statement for each item that they "most strongly believe to be the case." Six "filler" items are included so that participants are uncertain about the nature of the instrument. Items are scored in the external direction with participants receiving one point for every external response they choose. Internal consistency ranged from .65-.79, and test-retest reliability ranged from .55-.83 in the initial research on this scale (Rotter, 1966). Rotter's Internal-External locus of control scale has also been previously used with adolescents (Gatz, Tyler & Pargament, 1978; O'Brien & Feather, 1990). The present study revealed a low internal consistency coefficient alpha of .42 for this scale.

Children's Attributional Style Questionnaire Revised (CASQ-R; Kaslow & Nolen- Hoeksema, 1991)

The CASQ-R was designed to measure attributional style in children. The CASQ-R consists of 24 forced-choice items. Three dimensions of attributions are assessed including: global-specific, stable-unstable, and internal-external. Twelve items address negative events, and 12 address positive events. Thompson and colleagues (1998) concluded that the CASQ-R had good overall criterion-related validity. In regards to the specific issues that were addressed in the current study, there were four items assessing internal-external attributions for positive events as well as four items for internal-external attributions for negative events. Higher scores indicate a propensity toward internal attributions for either positive or negative events. A composite score for the internality dimension of attributional style (i.e., self-aggrandizing attributional style) was calculated by adding the number of internal attributions for positive events to the inverse of internal attributions made for negative events. Higher scores on this composite are more indicative of a self-aggrandizing attributional style. Internal consistencies of the internal-external attribution variables were low in the present study with a composite internal alpha of .17, a positive internal attribution alpha of .27 and a negative internal attribution alpha of .12.

Rosenberg Self-Esteem Scale (RSE; Rosenberg, 1965)

The RSE has been widely used in the study of self-esteem and consists of 10 items rated on a four point scale. The RSE was designed to assess global self-esteem. The response scale ranges from "strongly agree" to "strongly disagree." Silver and Tippett (1965) examined the validity of the RSE and obtained correlations with similar measures ranging from .56 to .83. A recent study obtained a Cronbach's alpha of .80 in their study of adolescents (Wadman, Durkin & Conti-Ramsden, 2008). The present study revealed an internal consistency of .87 for the total RSE score.

CHAPTER IV

PROCEDURE

Participation in this study was voluntary, and informed consent was collected prior to obtaining data. Parental consent was obtained at the time that adolescents enrolled in the intervention program. After consent from the parents, the youth were given the opportunity to agree or refuse to participate in the study through signing an informed assent form. Refusal to participate in the study did not affect a youth's status in the intervention program. Participants were informed of their right to refuse participation or to withdraw from participation at any time. Surveys were completed in a classroom setting in groups of approximately 12-18 adolescents. Participants were provided written surveys which were also read aloud. Data collection for this study and the larger project of which it was a part required approximately three 45-minute sessions, with sessions taking place over the course of 2 weeks.

CHAPTER V

RESULTS

Descriptive Statistics and Correlations Involving Demographic Variables

Descriptive statistics for the main variables and outcomes of interest are shown in Table 1.

Table 1.

Descriptive Statistics for the Variables of Interest

Variable (possible range)	***M***	***SD***	***Minimum***	***Maximum***	***Skew***
Narcissism (0-120)	56.48	14.37	20.00	94.05	.03
External Locus of Control (0-23)	9.94	2.89	2.00	22.88	.21
Self-Esteem (0-30)	20.88	5.66	2.00	30.00	-.65
Aggression (0-120)	20.86	19.69	.00	120.00	1.95
Proactive Aggression (0-60)	7.22	10.05	.00	60.00	2.35
Reactive Aggression (0-60)	13.65	10.63	.00	60.00	1.35
Attributional Style (0-8)	5.16	1.42	1.00	8.00	-.25
Positive Int. Attribution (0-4)	2.83	.99	.00	4.00	-.58
Negative Int. Attribution (0-4)	1.67	1.02	.00	4.00	.08

Aggression (i.e., overall aggression, 1.95, proactive aggression, 2.35; reactive aggression, 1.35) was positively skewed, indicating that some individuals reported high levels of aggression, whereas most participants tended to report no, or little, aggression. Correlational analyses were conducted to examine the relations among the variables of interest (i.e., reactive and proactive aggression, LOC, narcissism, self-esteem, and attributional style) with results shown in Table 2.

Table 2

Correlations among the Variables and Outcomes of Interest for the Entire Sample

	1.	**2.**	**3.**	**4.**	**5.**	**6.**	**7.**	**8.**	**9.**	**10.**
1. Gender	-	-.07	.12	-.13	-.13	-.12	-.13	.05	.14	.06
2.Narcissism		-	.00	.28**	.13	.16*	.09	.01	.04	.02
3. External LOC			-	- .22**	.14	.16*	.10	-.07	-.18*	-.07
4. Self-Esteem				-	- .20*	-.17*	- .20**	.32**	.28**	-.17*
5. Aggression					-	.95**	.96**	- .25**	-.15	.20*
6. Proactive Agg.						-	.81**	- .26**	-.17*	.20*
7. Reactive Agg.							-	- .21**	-.11	.19*
8. Attribution Style								-	.70**	-.72**
9. Pos Int. Att.									-	.00
10. Neg Int. Att.										-

Note. Attributional style is defined as a self-aggrandizing attributional style, with this score computed by adding the number of internal attributions made for positive events and the number of external attributions made for negative events.

*$p < .05$; **$p < .01$

Narcissism was significantly positively correlated with proactive aggression $r = .16$, $p < .05$. However, it was not significantly correlated with reactive aggression, LOC, or attributional style. Self-esteem, $r = .28$, $p < .01$, was significantly positively correlated with narcissism. Thus, Hypothesis 1 was only partially supported.

Contrary to expectations, self-esteem was negatively correlated with aggression without controlling for narcissism, $r = -.20$, $p = .01$. A partial correlation analysis revealed that when controlling for narcissism, self-esteem was still negatively correlated with aggression, $r = -.28$, $p < .001$. As expected, self-esteem was negatively correlated with an external LOC, $r = -.22$, $p < .01$, such that higher self-esteem was associated with more of an internal LOC. Consistent with expectations, self-esteem was also positively correlated with internal attributions for positive events, $r = .28$, $p < .01$, and negatively correlated with internal attributions for negative events, $r = -.17$, $p < .05$. Thus, Hypothesis 2 was partially supported.

Interaction between Narcissism & LOC in the Prediction of Aggression

Hypothesis 3 predicted that LOC would moderate the relation between narcissism and aggression but not self-esteem and aggression. An external LOC was expected to be related to aggression overall, but an internal LOC was expected to be related to aggression among individuals with higher levels of narcissism. An external LOC was not significantly correlated with overall or reactive aggression, but external LOC was significantly correlated with proactive aggression, $r = .16$, $p < .05$. Multiple regression analyses were used to test for a potential interaction between narcissism and LOC in the prediction of overall aggression, as well as for proactive and reactive aggression in subsequent models. First, centered scores for narcissism and LOC were entered as predictors in step one predicting overall aggression, followed by the addition of the narcissism by LOC interaction term as a predictor in the next step to determine if the interaction term accounted for a significant portion of unique variance in overall aggression.

This procedure was then repeated with proactive aggression and with reactive aggression as the criteria. These models were then tested using self-esteem instead of narcissism as a predictor.

Table 3

Multiple Regression Analyses with Narcissism and External LOC as Predictors of Overall Aggression, Reactive Aggression, and Proactive Aggression

	Overall Aggression			Proactive Aggression			Reactive Aggression		
	Main Effects Model β	Interaction Model β		Main Effects Model β	Interaction Model β		Main Effects Model β	Interaction Model β	
	ΔR^2			ΔR^2			ΔR^2		
Narcissism	.13	.12	.00	.15*	.14	.01	.09	.08	.00
External LOC	.18*	.18*		.21**	.20*		.14	.14	
Narc X LOC		.06			.09			.03	
R^2 for model	.05*	.05		.07**	.08**		.03	.03	

*$p < .05$; **$p < .01$

The results of the regression analyses using narcissism as the predictor are summarized in Table 3. In the model predicting overall aggression, there was a significant main effect for external LOC, $\beta = .18$ $p < .05$, indicating a positive association between external LOC and aggression, consistent with expectations. However, there was no significant interaction between narcissism and LOC in predicting overall aggression. In the model predicting proactive aggression, there was a significant main effect for narcissism, $\beta = .15$, $p < .05$, indicating a positive association between narcissism and proactive aggression. In addition, there again was a significant main effect for LOC, $\beta = .21$, $p < .01$. There was no significant interaction between

narcissism and LOC for predicting proactive aggression. For reactive aggression, there were no significant main effects or interactions. Therefore, Hypothesis 3 was not supported.

Table 4

Multiple Regression Analyses with Self-Esteem and External LOC as Predictors of Overall Aggression, Reactive Aggression, and Proactive Aggression

	Overall Aggression		Proactive Aggression		Reactive Aggression	
	Main Effects Model β	Interaction Model β	Main Effects Model β	Interaction Model β	Main Effects Model β	Interaction Model β
				ΔR^2		
	ΔR^2				ΔR^2	
Self-esteem	-.18*	- .12	-.14	-.08	.05	-.14
	.03*		.03*		.03*	
External LOC	.10	.09	.15	.13	-.20*	.04
SE X LOC		-.19*		-.19*		-.17*
R^2 for model	.05*	.08**	.05*	.08**	.05*	.07**

*$p < .05$; **$p < .01$.

The results of the second set of multiple regression analyses using self-esteem as the predictor are summarized in Table 4. For the prediction of overall aggression, there was a significant main effect for self-esteem, β = -.18, $p < .05$, R^2 for the model = .05, $p < .05$, indicating a negative association between self-esteem and overall aggression, but there was no significant main effect for LOC. The addition of the interaction term accounted for a significant amount of variance in aggression, β= -.19, $p < .05$, *change in* R^2 = .03. Regression lines depicting the interaction model were graphed (see Figure 1) according to the procedures outlined by Holmbeck

(2002). As indicated in Figure 1, low self-esteem coupled with an external LOC was associated with the highest levels of aggression. However, internal LOC did not appear to influence the relation between self-esteem and aggression in this model.

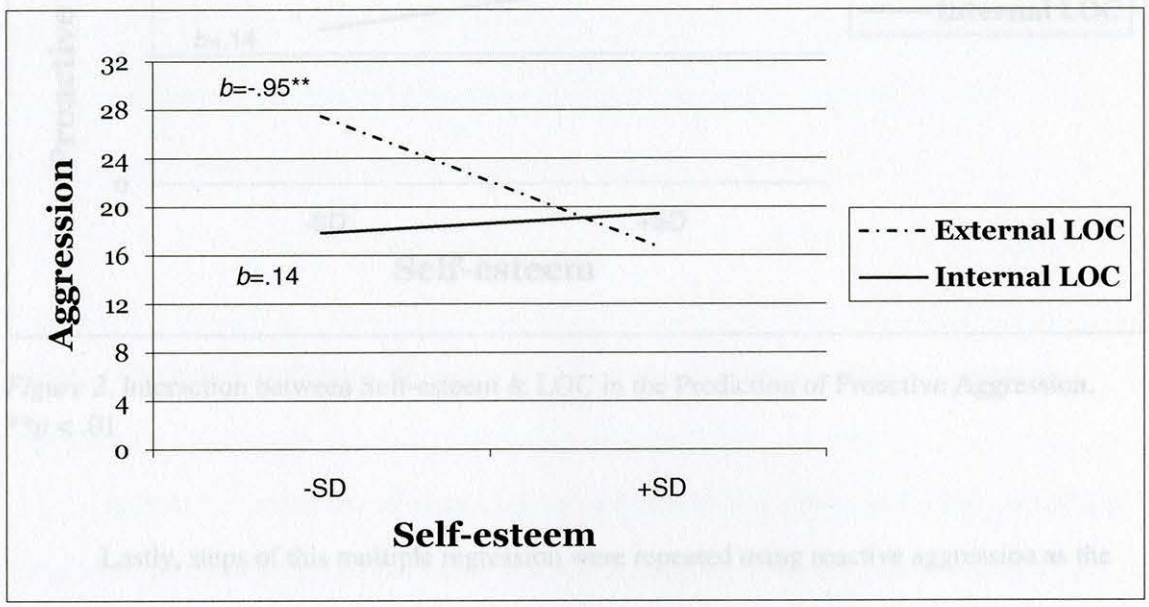

Figure 1. Interaction between Self-esteem & LOC in the Prediction of Aggression. $^{**}p < .01$

The steps of this multiple regression were repeated using proactive aggression as the criterion variable. There was no significant main effect for self-esteem or LOC in this model, R^2 for the model = .05, $p < .05$. However, there was a significant interaction between LOC and self-esteem in the prediction of proactive aggression, $\beta = -.19$, $p < .05$, *change in* $R^2 = .03$. Regression lines depicting the interaction model were again graphed (see Figure 2) according to the procedures outlined by Holmbeck (2002). As indicated in Figure 2, the combination of low self-esteem and an external LOC was again associated with the highest levels of aggression. As with the model for overall aggression, internal LOC did not appear to influence the relation between self-esteem and proactive aggression.

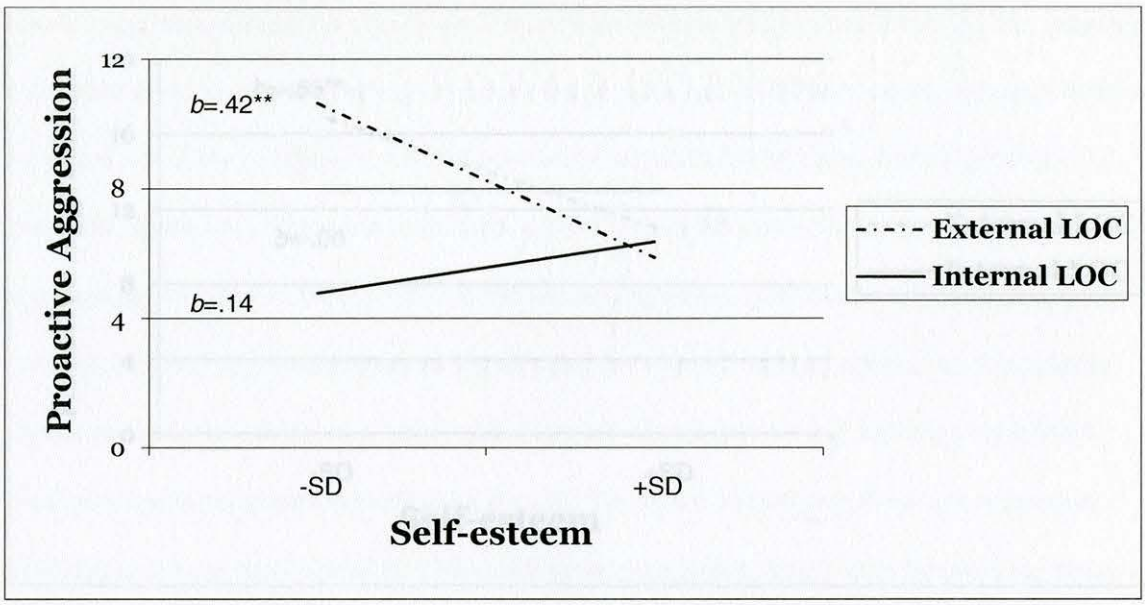

Figure 2. Interaction between Self-esteem & LOC in the Prediction of Proactive Aggression. $^{**}p < .01$

Lastly, steps of this multiple regression were repeated using reactive aggression as the criterion variable and are summarized in Table 4. There was a significant main effect for LOC, $\beta = -.20$, $p < .05$, R^2 for the model = .05, $p < .05$, indicating a negative association between self-esteem and reactive aggression, but there was no significant main effect for LOC. In addition, there was a significant interaction between LOC and self-esteem in the prediction of reactive aggression $\beta = -.17$, $p < .05$, change in $R^2 = .03$. Regression lines depicting the interaction model were graphed (see Figure 3). As indicated in Figure 3, low self-esteem coupled with an external LOC was associated with the highest levels of aggression. However, internal LOC did not appear to influence the relation between self-esteem and reactive aggression.

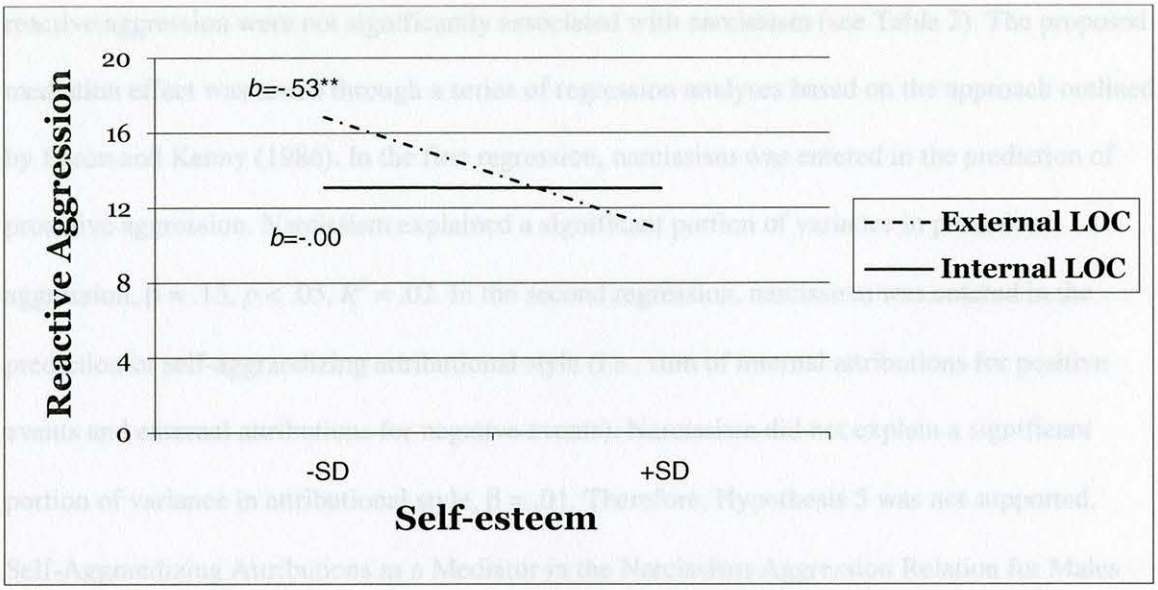

Figure 3. Interaction between Self-esteem & LOC in the Prediction of Reactive Aggression.
$^{**}p < .01$

It should be noted that all three LOC by self-esteem interactions held while controlling for gender. To test whether gender influenced the findings regarding narcissism and LOC, a three-way interaction model involving narcissism, gender, and LOC was examined using multiple regression analysis. These analyses are discussed in Appendix A.

Self-Aggrandizing Attributions as a Mediator in the Narcissism-Aggression Relation

It was hypothesized that narcissism would be associated with more internal attributions for positive events but that attributions for positive events would not be specifically correlated with (reactive or proactive) aggression (Hypothesis 4). However, narcissism was not correlated with internal attributions for positive events $r = .04$. In addition, internal attributions for positive events were negatively correlated with proactive aggression, $r = -.17$, $p < .05$, (see Table 2). Therefore, Hypothesis 4 was not supported.

Hypothesis 5 predicted that attributional style would mediate the relation between narcissism and aggression. However, the possible mediation effects of attributional style could only be explored between narcissism and proactive aggression because overall aggression and

reactive aggression were not significantly associated with narcissism (see Table 2). The proposed mediation effect was tested through a series of regression analyses based on the approach outlined by Baron and Kenny (1986). In the first regression, narcissism was entered in the prediction of proactive aggression. Narcissism explained a significant portion of variance in proactive aggression, $\beta = .15$, $p < .05$, $R^2 = .02$. In the second regression, narcissism was entered in the prediction of self-aggrandizing attributional style (i.e., sum of internal attributions for positive events and external attributions for negative events). Narcissism did not explain a significant portion of variance in attributional style, $\beta = .01$. Therefore, Hypothesis 5 was not supported.

Self-Aggrandizing Attributions as a Mediator in the Narcissism-Aggression Relation for Males

Additional analyses revealed that narcissism was significantly related to overall aggression for males, $r = .24$, $p < .01$. Therefore, the hypothesized mediational model was tested using males ($n = 148$) only. In the first regression, narcissism was entered in the prediction of overall aggression. Narcissism explained a significant portion of variance in overall aggression, $\beta = .24$, $p < .01$, $R^2 = .06$. In the second regression, narcissism was entered in the prediction of attributional style. Narcissism did not explain a significant portion of variance in attributional style, $\beta = -.06$, $R^2 = .00$. Since narcissism was not associated with a self-aggrandizing attributional style for males, the proposed mediational model was not supported for males.

Mediation of the Self-Esteem-Aggression Relation by Attributional Style

Based on the significant associations between self-esteem and aggression as well as attributional style (see Table 2), a mediational model for self-esteem was explored as well. In the first regression, self-esteem was entered in the prediction of aggression. Self-esteem explained a significant portion of variance in overall aggression, $\beta = -.20$, $p < .05$, $R^2 = .04$. In the second regression, self-esteem was entered in the prediction of attributional style, with self-esteem explaining a significant portion of variance in attributional style, $\beta = .32$, $p < .01$, $R^2 = .10$. In the

third regression, attributional style and self-esteem were entered simultaneously in the prediction of overall aggression. Results revealed that attributional style explained a significant portion of the variance in overall aggression, $\beta = -.20$, $p < .05$, with a relatively self-deprecating (i.e., external attributions for positive events, internal attributions for negative events) attributional style being associated with higher levels of aggression. However, self-esteem no longer explained a significant portion of the variance in aggression, $\beta = -.14$, p = n.s., after attributional style was entered into the model. The overall R^2 for this model was .08, $p < .01$. Thus, it appears that attributional style partially mediated the relation between self-esteem and overall aggression, although the reduction in the effect of self-esteem was relatively small. The Monte Carlo Method (MacKinnon, Lockwood, & Williams, 2004) was used to obtain 95% confidence intervals for the indirect effect (i.e., the product of the predictor-mediator *b*-weight and the mediator-criterion *b*-weight) for this model as a way to test the magnitude of this mediation effect. The indirect effect for this model was $b = -.22$ (95% confidence interval = -.4577 to -.04424).

The steps of this mediation were repeated with proactive aggression as the criterion. Self-esteem explained a significant portion of variance in proactive aggression, $\beta = -.17$, $p < .05$, $R^2 = .03$. Because it had already been established that self-esteem was significantly predictive of attributional style, the next regression included attributional style and self-esteem simultaneously as predictors of proactive aggression. Results revealed that self-aggrandizing attributional style explained a significant portion of the variance in proactive aggression, $\beta = -.23$, $p < .01$. However, self-esteem no longer explained a significant portion of the variance in aggression after attributional style was entered into the model, $\beta = -.11$, p = n.s. The overall R^2 for the model was .08, $p < .01$. Thus, again self-aggrandizing attributional style appeared to partially mediate the negative association between self-esteem and proactive aggression. The 95% confidence interval for the indirect effect of the mediator in this model, $b = -.13$, was -.2544 to -.0319.

Lastly, the steps of this mediation were repeated with reactive aggression as the criterion. Self-esteem explained a significant portion of variance in reactive aggression, $\beta = -.20$, $p < .01$, $R^2 = .04$, $p < .01$. As noted above, self-esteem also explained a significant portion of variance in attributional style. Next, attributional style and self-esteem were entered simultaneously in the prediction of reactive aggression, R^2 for the model = .07, $p < .01$. When entered simultaneously with attributional style, the effect for self-esteem on reactive aggression was slightly reduced, $\beta = -.16$, $p < .06$. Therefore, the Monte Carlo method was again implemented to derive 95% confidence intervals for the indirect effect (i.e., the product of the predictor-mediator *b-weight* and the mediator-criterion *b-weight*) of the mediator (i.e., attributional style). The 95% confidence interval for the indirect effect of the mediator in this model, $b = -.13$, was -.2538 to -.0302.

Interaction between Narcissism and Attributional Style in the Prediction of Aggression

Because the hypothesized mediational models involving self-aggrandizing attributional style were not supported for narcissism (see above), attributional style was explored as a potential moderator in the association between narcissism and aggression. First, centered narcissism and self-aggrandizing attributional style (i.e., the sum of internal attributions for positive events and external attributions for negative events) were entered as predictors of overall aggression, followed by the addition of the narcissism by attributional style interaction term as a predictor in the next step to determine if the interaction term accounted for a significant portion of unique variance in overall aggression. This procedure was then repeated with proactive aggression and with reactive aggression as the criteria.

The results of these regression analyses are summarized in Table 5.

Table 5. *Multiple Regression Analyses with Narcissism and Attributional Style as Predictors of Overall Aggression, Reactive Aggression, and Proactive Aggression*

	Overall Aggression			Proactive Aggression			Reactive Aggression		
	Main Effects Model β	Interaction Model β	ΔR^2	Main Effects Model β	Interaction Model β	ΔR^2	Main Effects Model β	Interaction Model β	ΔR^2
Narcissism	.13	.14	.00	.17*	.17*	.00	.09	.10	.00
Att. Style	-.26**	- .26**		-.27**	-.27**		-.23**	-.23**	
Nar X Att.		.03			.03			.04	
R^2 for model	.09**	.09**		.10**	.10**		.06**	.06*	

*$p < .05$; **$p < .01$

These analyses revealed a significant main effect for attributional style, β = -.26 p <.01, such that a self-aggrandizing attributional style (i.e., external attributions for negative events and internal attributions for positive events) was associated with lower levels of aggression. However, there was no significant interaction between narcissism and attributional style. In the model predicting proactive aggression, there was a significant main effect for narcissism, β = .17, p < .05, indicating a positive association between narcissism and proactive aggression. There was also a significant main effect for attributional style, β = -.27, p <.05, indicating the same pattern of association as found in the model for overall aggression, but again, there was no significant interaction between narcissism and attributional style for predicting proactive aggression. In the model using reactive aggression as the criterion variable, there was a significant main effect for attributional style, β = -.23 p <.01, indicating that self-aggrandizing attributions were associated with lower reactive aggression when controlling for narcissism. Again, there was no significant interaction between narcissism and attributional style for predicting reactive aggression.

CHAPTER VI

DISCUSSION

Contrary to the main study hypothesis, narcissism was not significantly correlated with reactive or overall aggression. However, the proposed relations held for males in this sample (see Appendix A). The overall results are inconsistent with previous findings (Barry, Grafeman et al., 2007; Bushman & Baumeister, 1998; Stucke, 2003; Washburn et al., 2004). It should be noted that aggression levels for this sample were significantly skewed for all three types of aggression (see Table 1); thus, this particular sample of adolescents may have been relatively unlikely to report using aggression in general, irrespective of their narcissism levels. Another consideration is that self-report measures may not be sensitive enough to pick up on reactive aggression. Indeed, previous studies of narcissism and aggression have often measured reactive aggression by provoking an individual in a laboratory setting (Bushman & Baumeister, 1998; Thomaes et al., 2008).

Participants with high levels of narcissism were still relatively likely to report using proactive aggression. Similarly, Seah and Ang (2008), in their study of Asian adolescents, found that narcissism was associated with self-reported proactive, but not self-reported reactive, aggression. In addition, Washburn and colleagues (2004) provide support for the narcissism-proactive aggression link among adolescents. Bogart, Benotsch, and Pavlovic (2004) suggest that because social comparison is particularly important to people who are higher on narcissistic traits, these individuals may be more likely to direct efforts at increasing their social status relative to others. However, when typical social interactions do not help improve these individuals' grandiose images, they are likely to respond with aggression (Raskin et al., 1991). Proactive aggression may be one instrument used by individuals with high levels of narcissism to gain the respect and admiration of their peers. It is important to reiterate that proactive aggression was

positively skewed in this study. Therefore, it does not appear that proactive aggression was common or viewed as acceptable in general. Rather, it seems that certain individuals are relatively likely to use such behaviors for personal gain and/or are willing to report doing so.

Consistent with previous literature (Storms & Spector, 1987), an external LOC was related to aggression (i.e., proactive aggression); however, LOC was not related to narcissism in this sample as had been expected. Possible explanations for this result could be based on the measure used and the context in which data were collected. More specifically, the present study revealed a low internal consistency coefficient alpha of .42 for the measure of LOC. In addition, as previously stated, participants in this study were enrolled in a military-style residential program. To be successful in the program, youth had to follow a strict schedule and abide by program rules. Consequently, this measure may not have reflected participants' general propensities toward an internal or external LOC due to their living situation at the time of data collection. It is plausible that, at the time of this study, participants felt a lack of control over events and their environment, even though some of them may typically have a greater sense of personal control outside of the program. More specifically, due to the meticulous schedule, participants' LOC— even individuals with high levels of narcissism who may usually have an internal LOC— may have been more external. Of course, the lack of skewness in the LOC distribution for this sample suggests that an external LOC was not predominant for these participants. It is also possible that, contrary to the study's hypothesis, individuals with high levels of narcissism simply are no more likely to report feeling in or out of control of events in their lives. These individuals, although they have an apparent need for control, may not actually believe they are in control relative to their peers who are lower in narcissism.

Although the hypothesized interaction between narcissism and LOC in the prediction of aggression was not supported, the results indicated that low self-esteem was associated with aggression for individuals with an external LOC. The finding concerning self-esteem may have

important implications for self-esteem and narcissism research, particularly in understanding their role in adolescent aggression. As noted above, low self-esteem traditionally was believed to cause aggression (Rogers, 1961). In the present study, self-esteem was significantly negatively correlated with aggression. In addition and consistent with expectations, when controlling for narcissism, self-esteem was significantly negatively correlated with aggression. This finding is consistent with research conducted by Donnellan and colleagues (2005) that found a relation between low self-esteem and aggression, independent of narcissism. Other literature, however, suggests that it is not low self-esteem per se but that inflated, fragile, or unstable self-esteem may be factors in aggression (Baumeister, Smart, & Boden, 1996; Bushman et al., 2009; Zeigler-Hill, 2006).

Thus, the association between self-esteem and aggression continues to appear complex. Results from the present study further suggest that LOC is one factor that influences the relation between self-esteem and aggression. Previous research has found a link between low self-esteem and an external LOC (Geist & Borecki, 1982), and as with the present study, a low self-esteem/external LOC combination has been associated with negative consequences such as depression and aggression (Aiken & Baucom, 1982; Zainuddin & Taluja, 1990). On the other hand, an internal LOC is usually associated with adaptive characteristics (Armstrong & Boothroyd, 2008; Findley & Cooper, 1983), and in the present study, an internal LOC did not seem to heighten the risk of aggression for individuals with low self-esteem or high levels of narcissism.

Therefore, in addition to individuals with narcissistic characteristics following an ego threat (e.g., Barry, Chaplin, & Grafeman, 2006; Bushman & Baumeister, 1998; Thomaes et al., 2008), aggression may be pronounced in individuals who not only have negative self-perceptions but who also feel a loss of control over events. Aggressive strategies could be a coping mechanism such that these individuals may use aggression to regain control over outcomes that

are perceived both negatively and out of one's control. On the other hand, individuals with stable, higher levels of self-esteem may not feel like they have to resort to such negative strategies in order to achieve their goals (Zeigler-Hill, 2006).

An additional possibility not examined in this study is that individuals with higher levels of aggression develop an external LOC and lower levels of self-esteem due to the consequences of their behavior. Aggressive individuals may not be viewed favorably by their peers thus leading to lower levels of self-esteem. In addition, these individuals may feel that they have no control over social outcomes because of peer rejection resulting from their behavior, furthering their external LOC and low self-esteem. Future research should examine this possibility as well. It is important to determine the direction of this relation for treatment and intervention. If aggression is the precipitant for lower self-esteem and an external LOC then reducing the individual's aggression through strategies aimed at increasing impulse control and improving coping with negative events would be primary. However, if an external LOC coupled with low self-esteem tends to result in subsequent aggression then those perceptions also take on importance in intervention efforts. Thus, further examining the interplay between an external LOC and low self-esteem is clearly important for the prediction and amelioration of aggression.

In addition and contrary to hypotheses, attributional style did not mediate the narcissism-aggression relation. Previous studies have shown that individuals with high levels of narcissism tend to make internal attributions for positive events (Farwell and Lloyd, 1998; Rhodewalt & Morf, 1998). However, the participants in those studies rated themselves favorably on a particular task or outcome. For example, individuals were asked to estimate their current or final grade in a course or make attributions for their successful completion of a task. In the current study, a general attributional style questionnaire was used in which participants were presented with hypothetical situations and asked to make attributions based on the notion that the situation happened to them. This method had poor internal consistency in the present study that may have

affected results. More specifically, individuals with high levels of narcissism perceive themselves, and want to be perceived, as superior or grandiose (Baumeister et. al., 2000); however, if a task or domain lacks direct personal relevance for the participant, he or she may not have a need to self-aggrandize.

Previous studies have shown that individuals with narcissistic tendencies respond aggressively if they perceive another person to be the cause of a negative event or an ego threat (Bushman & Baumeister, 1998; Stucke, 2003). One potential reason that attributional style failed to mediate the narcissism-aggression relation in the present study is that a negative event did not actually occur, and there was no subsequent opportunity for aggression. Indeed, Farwell and Lloyd (1998) found that although individuals with high levels of narcissism in their study (where there was no negative event) made internal attributions for success, they did not engage in other derogation. Furthermore, Bushman and Baumeister (1998) found that narcissism was related to aggression after negative feedback, but this effect was only present toward the perceived source of the feedback and not toward another target. It appears that the link between aggression and external attributions for negative events among individuals with narcissistic tendencies may be contingent on the individual actually experiencing the event and being able to direct his or her response to the perceived source of the negative event. Such responses, which often entail aggression, are thought to be a means of reasserting control and perceived superior status for narcissistic individuals (Bushman & Baumeister, 1998) and may manifest more clearly in real-life social situations than would be apparent from an individual's report of his or her own tendencies.

An interesting finding from the present study was that internal attributions for positive events were negatively correlated with proactive aggression. That is, individuals who were more likely to make internal attributions for positive events were less likely to be aggressive, whereas individuals who tended to credit external factors for success were more likely to self-report proactive aggression. This finding suggests that if the individual feels responsible for positive

events that happen in life, he or she is less likely to use aggression to reach social goals. Thus, as suggested above, aggression could be a coping strategy for individuals with negative self-perceptions and a low sense of personal control but not for an individual who feels secure about the role of his or her own talents or skills in obtaining positive outcomes. Lastly, a self-aggrandizing attributional style (i.e., taking credit for the good and blaming external factors for the bad) was associated with unique negative variance in aggression, when controlling for narcissism. A self-aggrandizing attributional style is thought to be problematic (Stucke, 2003). However, these results appear to suggest that this attributional style may be beneficial for some individuals for some of the same reasons as to why a tendency to frequently blame oneself for negative events might be associated with aggression.

Limitations

The current study had a number of limitations, one of which was the generalizability of this sample to the overall population of adolescents, as participants were at-risk adolescents enrolled in a military style intervention program. In addition, this sample consisted of mainly European males from the southern United States. Another important limitation was the reliance upon the individual's self-report for all variables examined in this study. Self-reports could be affected by socially desirable responding, attempts to deceive the researcher, or inaccurate recall of past behaviors. In addition, some relations could be inflated due to this shared source variance. However, self-report measures are useful in their convenience and in their unique ability to evaluate self-perception constructs (e.g., narcissism, self-esteem, LOC) such as those examined in this study. Nevertheless, future studies should employ laboratory means of measuring aggression as well as other methods to evaluate some of the variables of interest. For example, and as noted above, the method used to evaluate attributional style centered around reactions to hypothetical events; consequently, it may not have given an accurate picture of participants' tendencies during real-life positive and negative events. Participants' attributions for actual events would likely

yield more psychometrically sound and personally relevant information regarding the implications of their attributional style.

Future Directions

Future studies should address some of these limitations by obtaining data from additional sources (e.g., parent report, peer report, laboratory measures) and different samples (e.g., community). Replication in a community sample is needed to determine, for example, if the results obtained would differ depending on factors such as context or the sample distribution of aggressive behavior. Although this study provides information on the low self-esteem/external LOC relation for predicting problem behaviors (i.e., aggression) in adolescents, additional moderating variables may also play a role (e.g., negative feedback/ego threat/shame) and are worthy of further consideration. In addition, research examining low self-esteem and aggression should determine whether or not variables in addition to LOC further our understanding of how negative self-perceptions might be associated with adolescent aggression.

Lastly, longitudinal studies are needed to examine the development of narcissism and self-esteem and their behavioral consequences. These self-perception variables may manifest differently across the lifespan, and observing the development of narcissism and self-esteem may help researchers determine when the self-perception-aggression relation is most pronounced and which factors may account for such patterns. In addition, development may influence the relation between self-esteem and narcissism. For example, self-esteem was only weakly correlated with narcissism in one study of adolescents with the pattern of association tending to vary by age (Barry et al., 2003). It is important to examine this relation to determine if there is a critical point when an inflated self-esteem might develop into narcissism or if the origins are the same. Furthermore, depending on development, these self-perception variables may have unique effects on externalizing behaviors. Barry and colleagues (2003) found that self-esteem and narcissism had different relations to conduct problems depending on the age of the youth. In particular,

narcissism was related to conduct problems for older, but not younger children. Conversely, self-esteem was negatively related to conduct problems in younger but not older children. In addition, Edens (1999) as well as Harter (1990) suggest that children and adolescents evaluate themselves based on different domains as they mature. It is, therefore, also important to consider age in assessing what domains are particularly relevant for the child or adolescent's self-esteem and associated behaviors.

In conclusion, there are mixed views on the relation between self-perception, particularly self-esteem, and aggression (Bushman et al., 2009; Bushman & Baumeister, 1998; Donnellan et al., 2005; Twenge & Campbell, 2003). However, to help clarify this issue, there appear to be moderating variables that influence when aggression is likely to occur and for whom. It is, therefore, too simplistic to assume that either positive or negative self-perceptions are tied to aggression. It will be critical for future investigations to designate the important intrapersonal, contextual, and developmental factors that influence the self-perception-aggression relation and that, in turn, might inform efforts to curtail youth aggression.

APPENDIX A

INTERACTIONS OF NARCISSISM, LOCUS OF CONTROL, AND GENDER IN THE PREDICTION OF AGGRESION

To test whether gender influenced the findings regarding narcissism and LOC, a three-way interaction involving narcissism, gender, and LOC was examined using a hierarchical multiple regression analysis. The centered main effects predictors (i.e., narcissism, gender, and LOC) were entered on the first step, all two-way interactions between centered predictors were entered on the second step, and the three-way interaction term between predictors was added in a third step. Results are summarized in Table A1.

Table A1.

Multiple Regression Analyses with Narcissism, LOC and Gender as Predictors of Aggression

	Main Effects Model β	2-way Interaction Model β	ΔR^2	3-way Interaction Model β	ΔR^2
Narcissism	.12	.13	.09	.09	.01
LOC	.20*	.16*		.12	
Gender	-.13	-.09		-.06	
Gender X Narc		-.28***		-.39***	
Gender X LOC		-.16*		-.23*	
Narc X LOC		.16*		.16*	
Gender X LOC X Narc				.17	
R^2 for model	.07*	.16***		.18	

Note. Scores on all variables were centered for these analyses.*$p < .05$; ***$p < .001$.

Prior to entering the interaction terms, there was a significant main effect for LOC, $\beta = .20$, $p < .05$, indicating an association between an external LOC and overall aggression. More importantly, the addition of the interaction terms revealed a significant two-way interaction between gender and narcissism, $\beta = -.28$, $p < .001$, as well as additional two-way interactions (see below). The *change in* R^2, including all interaction terms, was .09, *change in* F (3, 149) = 5.57, $p < .001$. The regression lines depicting this two-way interaction in a reduced model were graphed (see Figure A1) according to the procedures outlined by Holmbeck (2002). Aggression levels were highest for male adolescents with high levels of narcissism, whereas female adolescents with high levels of narcissism did not demonstrate elevated levels of aggression.

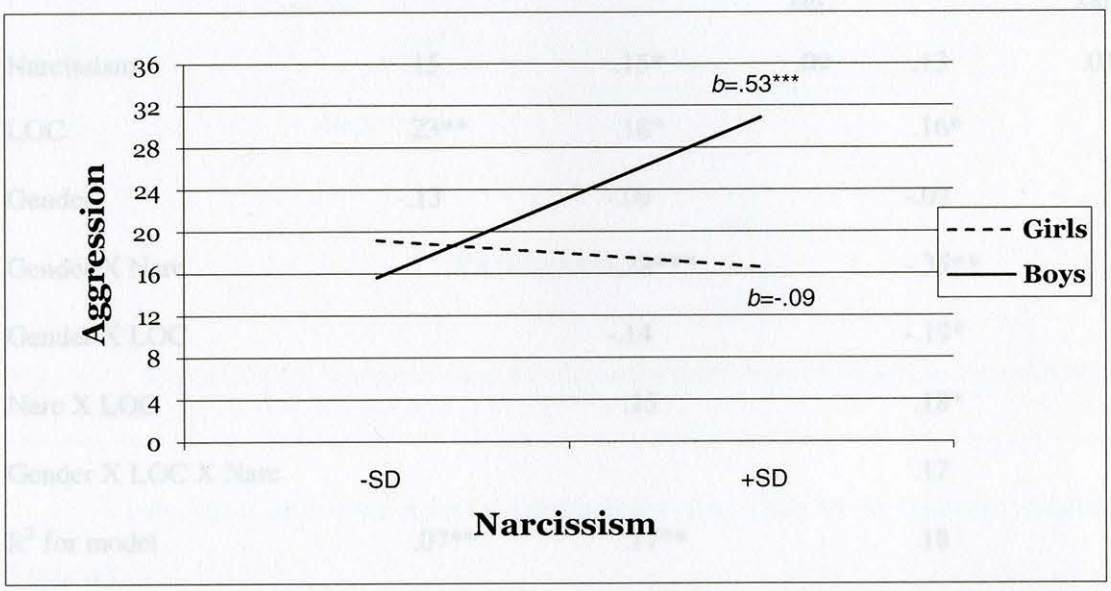

Figure A1. Interactions of Narcissism and Gender in the Prediction of Aggression.***$p < .001$.

There was also a significant two-way interaction between gender and LOC, $\beta = -.16$, $p < .05$, in this model. However, this interaction did not remain significant in a reduced model that included only the two main effects (i.e., gender and LOC) and the 2-way interaction term. In addition, there was a significant two-way interaction between narcissism and LOC, $\beta = .16$, $p < .05$, in this model. However, this interaction did not remain significant in a reduced model that

included only the two main effects (i.e., narcissism and LOC) and the 2-way interaction term. The three-way interaction term (i.e., gender x LOC x narcissism) was not significant in the model predicting overall aggression.

The steps of this multiple regression were repeated using proactive aggression as the criterion variable and are summarized in Table A2.

Table A2. *Multiple Regression Analyses with Narcissism, LOC and Gender as Predictors of Proactive Aggression*

	Main Effects Model β	2-way Interaction Model β	ΔR^2	3-way Interaction Model β	ΔR^2
Narcissism	.15	.15*	.09	.13	.01
LOC	.23**	.18*		.16*	
Gender	-.13	-.09		-.07	
Gender X Narc		-.28***		-.35**	
Gender X LOC		-.14		-.19*	
Narc X LOC		.15		.18*	
Gender X LOC X Narc				.12	
R^2 for model	.07**	.17**		.18	

Note. Scores on all variables were centered for these analyses.

*$p < .05$; **$p < .01$; *** $p < .001$.

Prior to entering the interaction terms, there was a significant main effect for LOC, β = .23, $p < .01$, indicating a positive association between external LOC and proactive aggression The addition of the interaction terms revealed a significant two-way interaction between gender and narcissism in the prediction of proactive aggression, β = -.28, $p < .001$. The *change in* R^2,

including all interaction terms, was .09, *change in* $F(3, 149) = 5.35$, $p < .01$. The regression lines depicting the two-way interaction were graphed (see Figure A2) according to the procedures outlined by Holmbeck (2002), with high levels of narcissism being associated with the highest levels of aggression for males. However, narcissism was not associated with higher proactive aggression for females. The three-way interaction term in this model was not significant.

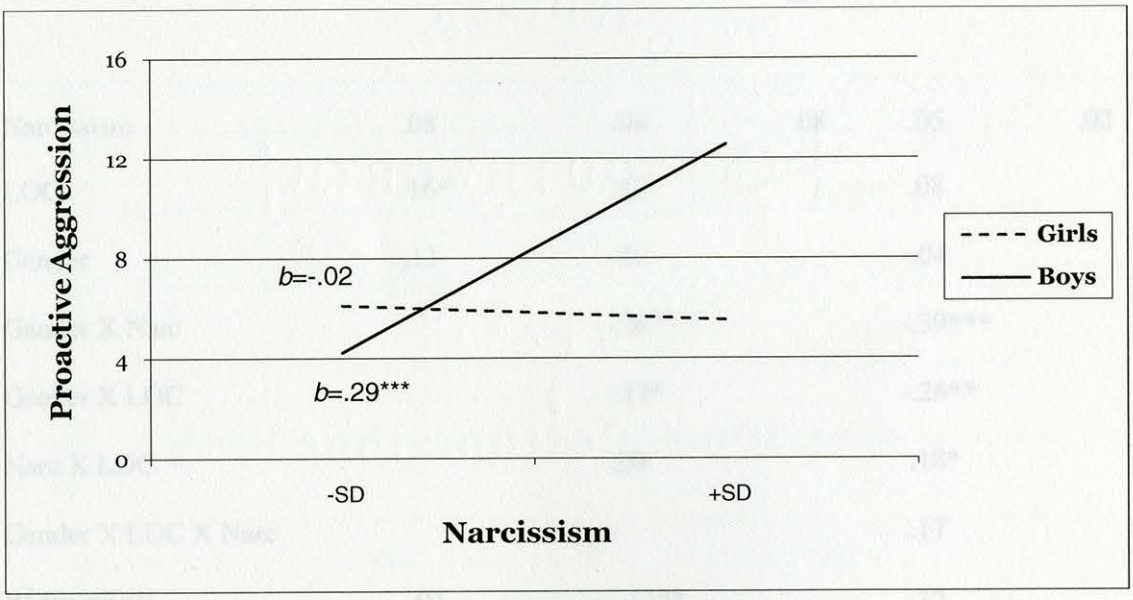

Figure A2. Interactions of Narcissism and Gender in the Prediction of Proactive Aggression. ***$p < .001$

Lastly, these steps were repeated using reactive aggression as the criterion variable (see Table A3).

Table A3. *Multiple Regression Analyses with Narcissism, LOC and Gender as Predictors of Reactive Aggression*

	Main Effects Model β	2-way Interaction Model β	ΔR^2	3-way Interaction Model β	ΔR^2
Narcissism	.08	.09	.08	.05	.02
LOC	.16*	.12		.08	
Gender	-.13	-.08		-.04	
Gender X Narc		-.26***		-.39***	
Gender X LOC		-.17*		-.26**	
Narc X LOC		.09		.18*	
Gender X LOC X Narc				.17	
R^2 for model	.04	.13**		.15	

Note. Scores on all variables were centered for these analyses.

*$p < .05$: **$p < .01$; $p < .001$.

Prior to entering the interaction terms, there was a significant main effect for LOC, β = .16, $p < .05$, indicating a positive association between an external LOC and reactive aggression. More importantly, the addition of the interaction terms revealed a significant two-way interaction between gender and narcissism in predicting reactive aggression, β = -.26, $p < .001$. The *change in* R^2 was .08, *change in* $F(3, 149) = 4.74$, $p < .01$. The regression lines depicting the two-way interaction (see Figure A3) again indicated that high levels of narcissism were associated with the

highest levels of aggression for males, whereas females with high levels of narcissism did not demonstrate higher aggression than females with low levels of narcissism. In addition, there was a significant two-way interaction between gender and LOC in predicting reactive aggression, β = -.26, p <.05. However, this interaction did not remain significant in a reduced model that included only the two main effects (i.e., gender and LOC) and the 2-way interaction term. Again, the three-way interaction term was not significant in this model.

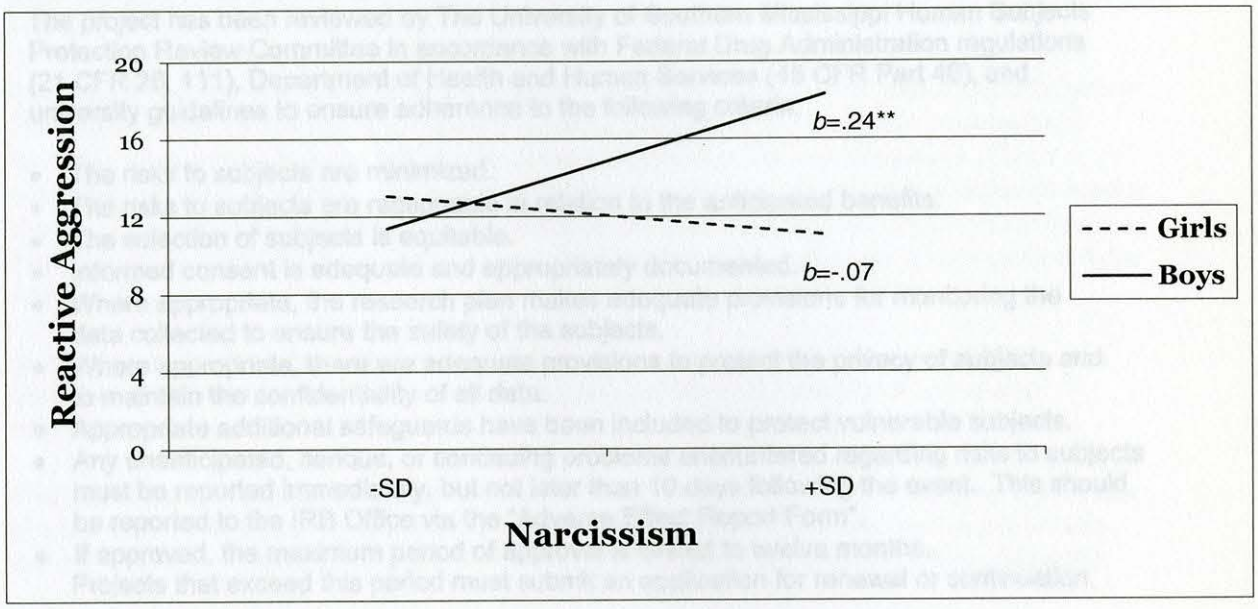

Figure A3. Interactions of Narcissism and Gender in the Prediction of Reactive Aggression.
**p < .01

APPENDIX B
HUMAN SUBJECTS REVIEW COMMITTEE APPROVAL

THE UNIVERSITY OF SOUTHERN MISSISSIPPI

Institutional Review Board

118 College Drive #5147
Hattiesburg, MS 39406-0001
Tel: 601.266.6820
Fax: 601.266.5509
www.usm.edu/irb

HUMAN SUBJECTS PROTECTION REVIEW COMMITTEE
NOTICE OF COMMITTEE ACTION

The project has been reviewed by The University of Southern Mississippi Human Subjects Protection Review Committee in accordance with Federal Drug Administration regulations (21 CFR 26, 111), Department of Health and Human Services (45 CFR Part 46), and university guidelines to ensure adherence to the following criteria:

- The risks to subjects are minimized.
- The risks to subjects are reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- Any unanticipated, serious, or continuing problems encountered regarding risks to subjects must be reported immediately, but not later than 10 days following the event. This should be reported to the IRB Office via the "Adverse Effect Report Form".
- If approved, the maximum period of approval is limited to twelve months. Projects that exceed this period must submit an application for renewal or continuation.

PROTOCOL NUMBER: **C24111802**
PROJECT TITLE: **Personality Predictors of Behavioral Outcomes in a Group of At-Risk Adolescents**
PROPOSED PROJECT DATES: **10/06/08 to 10/05/09**
PROJECT TYPE: **Change in Previously Approved Project**
PRINCIPAL INVESTIGATORS: **Christopher Barry**
COLLEGE/DIVISION: **College of Education & Psychology**
DEPARTMENT: **Psychology**
FUNDING AGENCY: **N/A**
HSPRC COMMITTEE ACTION: **Expedited Review Approval**
PERIOD OF APPROVAL: **10/06/08 to 10/05/09**

Lawrence A. Hosman
Lawrence A. Hosman, Ph.D.
HSPRC Chair

10-09-08
Date

APPENDIX C

INFORMED CONSENT FORM

Title of Research Project: Personality Predictors of Behavioral Outcomes in a group of At-risk Adolescents

Project Director: Christopher Barry, Ph.D
Department of Psychology
University of Southern Mississippi
(601) 266-5374

Purpose of Project: The purpose of this study is to better understand how an adolescent's personality, self-esteem, and thinking style might influence his or her current or past behavior and successes.

Procedures: Adolescents enrolled in the Youth Challenge Program will be asked to participate in this project. They will be asked to complete several questionnaires about their personalities, feelings, behavior and how they think about certain situations. The questionnaires will be administered orally in small group format as participants record their answers on separate answer sheets. The questionnaire portion will take place in one hour sessions, and it is expected that a total of approximately three one-hour sessions will be required for all of the questionnaires to be completed.

As the director of the Youth Challenge Program, you will also be asked to provide some background information on each of the participants, including the number of behavioral referrals/incidents while enrolled and their success rate in passing the GED.

Finally, near the end of an enrollment period (i.e., June or December) the researchers will return to administer some follow-up questionnaires to each participant. These will be completed in a one-hour session with each small group. We will also ask you to provide the above data again.

The researchers provide a general summary of results once they are available.

Potential Risks or Discomforts: The risks involved for the youth participating in this project are minimal. All of the procedures involve standard questionnaires and data that are often obtained in projects such as this and have been used with no evidence of adverse side effects. There may be some discomfort on the part of the youth providing personal information in this project. However, participants will be allowed to stop at any time if answering the questions makes them uncomfortable. Participants will be allowed to discuss such discomfort with the program staff or by contacting Dr. Chris Barry at the number provided above.

Potential Benefits: There will be no direct benefits to the participants. However, by participating in this project, the Youth Challenge Program will greatly assist the researchers in better understanding adolescents' personality, behavior, thinking, and emotions. The researcher could identify strengths among this group of adolescents, as well as inform further interventions with such a group of teens. Also, a summary of the results will be provided to me which may be helpful in learning more about youth served by the Youth Challenge Program.

Voluntary Participation: The participation of the Youth Challenge Program and of the individuals enrolled in the program is entirely voluntary and that the program or individuals can withdraw participation from the project at any time. Participants will be told of the purpose of the project, the information to be obtained, and will be given the opportunity to ask questions before providing their written assent to participate and at any point during the study.

Protection of Confidentiality: All of the information that is provided by or about individuals enrolled in the Youth Challenge Program will be kept strictly confidential. All of the information will be stored in a locked file cabinet, and only people involved in the research project will have access to it. When information is used in research, it is only done in a way that no one could know that the information is about any specific person. The only time that information would be released about any participant without his/her consent would be if a) there are reports that someone is in imminent danger of harming themselves or others, b) there are indications of ongoing or past child or elder abuse, or c) the pattern of responses leads to significant clinical concern that would appear to warrant specific attention. This last condition would lead to disclosure only with relevant program staff who would be able to intervene appropriately.

This project has been reviewed by the Human Subjects Protection Review Committee, which ensures that research projects involving human subjects follow federal regulations. Any questions or concerns about rights as a research subject should be directed to the chair of the Institutional Review Board, The University of Southern Mississippi, Box 5147, Hattiesburg, MS 39406, (601) 266-6820.

I HAVE BEEN FULLY INFORMED OF THE ABOVE DESCRIBED PROCEDURES WITH THEIR POSSIBLE BENEFITS AND RISKS, AND I GIVE PERMISSION FOR THE PARTICIPATION OF THE INDIVIDUALS ENROLLED IN THE YOUTH CHALLENGE PROGRAM IN THIS STUDY.

I FURTHER CERTIFY THAT I HAVE THE LEGAL AUTHORITY TO PROVIDE CONSENT FOR THE PARTICIPATION OF ALL ADOLESCENTS ENROLLED IN YOUTH CHALLENGE IN THIS PROJECT.

Signature_____ Date_____

Child's name (print)_____

Witness_____ Date_____

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